United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Vale District Office
100 Oregon Street
Vale, OR 97918
http://www.or.blm.gov/Vale/

1742
1210 (Dago Rd)

March 12, 2002

Dear Interested Citizen:

Enclosed for your review and comment is Environmental Assessment (EA) OR-030-02-021 for a road maintenance project which is located in the Leslie Gulch Area of Critical Environmental Concern (ACEC). The project site is also on and adjacent to the boundary road between the Upper Leslie Gulch and Slocum Creek Wilderness Study Areas. The terms and conditions of the BLM issued right-of-way require that the owner maintain the road to keep it passable and to minimize soil erosion. The actions addressed in this EA are beyond activities which are required for standard road maintenance.

You have thirty (30) days from the date of this letter to have postmarked for return any provided written comments on the EA. Public comments submitted for this planning review, including names and street addresses of respondents, will be available for public review at the Vale District Office during regular business hours (7:45 a.m. to 4:30 p.m., mountain time), Monday through Friday, except holidays. Individual respondents may request confidentiality. If you wish to withhold your name or address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your comments. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Please address your written comments to:

Tom Dabbs
Bureau of Land Management
100 Oregon Street
Vale, Oregon 97918

Thank you for your continued interest in the management of your public lands.

Sincerely,

s/Jon Freeman

Jon Freeman
Field Manager (acting)
Malheur Resource Area

Enclosure: as stated

Dago Gulch Road Repair

Environmental Assessment

OR-030-02-021

INTRODUCTION

The Dago Gulch Road joins the Leslie Gulch Road near Mud Spring (on private land) and runs south for approximately one mile on public lands before re-entering private lands. The portion of the road on public lands is located within the Leslie Gulch Area of Critical Environmental Concern (ACEC), is the boundary between two wilderness study areas (WSA's), and is a right-of-way (OR 36840) which is owned by the private land owner to the south (see Maps 1 and 2).

The Dago Gulch Road is a low standard constructed road which parallels the ephemeral drainage of Dago Gulch. At the project site (NW¼SE¼ of section 19, T. 26 S., R.45 E.), the road cuts across the toe of a steep slope which is approximately a quarter mile high. This slope is composed of naturally deposited granular, loose-weathered volcanic tuffaceous ash gravel. In this area, slight meanders of the drainage channel are closest to the road in two locations, separated by approximately 100 feet. At both locations, infrequent high runoff flows in the channel are directed towards the subgrade of the road. When conducting road maintenance, the right-of-way owner was forced to cut west into the abutting steep hill slope to keep the road passable. This initiated raffling and erosion of the tuff materials down the hill slope. The tuff gravels and soil associated with this hillside are the habitat for two special status plant species which are special wilderness and ACEC natural values, as are the bighorn sheep and the scenery of the area.

The right-of-way is sixteen feet wide, nonexclusive, non-possessory and was granted in 1984. It provides the only road access to the private lands at the head of Dago Gulch. The Terms and Conditions for the right-of-way require the owner to maintain the road in a passable condition and to limit erosion on the road with regular maintenance.

The road's placement in its original alignment had no direct impact on the natural flow characteristics of Dago Gulch. However, the advent of a severe runoff event in 1994 resulted in an alteration of the channel's directional flow pattern. The two mentioned meander segments are undercutting the road's prism.

In 1995, following an environmental assessment (EA OR-030-95-1), corrective road repair was performed as an effort to thwart continued undercutting and erosion of the road's subgrade at the two locations, to stabilize the road's alignment and side slope shoulder, and to preclude any further actions of road cutting and resultant erosion of the steep hill's tuff soils and habitat of the special status plant species. Repair included, but was not limited to (1) altering the level of the existing road with on-site native tuff material to shift the road's travel surface back to its original

alignment and away from the steep up-slope hill; and (2) installing two lines of highway concrete barriers parallel and adjacent to the base of the road's downslope bank, within and atop the sediments of the Dago Gulch channel. One site had approximately 100 linear feet of barriers placed, the second site approximately 75 linear feet. The concrete barrier structures served to prevent further erosion of the road's subgrade and associated side slope while retaining seasonal sediment-laden water flows within the channel. To accomplish this work, temporary surface disturbing activities within the channel environment by heavy machinery was required in the Upper Leslie Gulch WSA (located east of the road). At the time, these repairs were considered to be the action needed to provide protection of the road and the wilderness/ACEC values. In 1999, a severe spring season runoff event within the gulch undercut and dismantled various sections of the concrete barriers, re-initiating some undercutting of the road's subgrade and associated side slope. Since 1999, at least two incidents of runoff has further aggravated the stability of the barriers and the undercutting of the road's subgrade and its associated side slope embankments.

NEED FOR THE PROPOSED ACTION

Corrective road repair is necessary to prevent negative impacts to the two special status plant species and their habitat, as well as to protect the high scenic values of the two WSA's and relevant and important values of the ACEC, and to keep a valid existing road right-of-way passable over the long term.

The Leslie Gulch ACEC is managed in accordance with BLM's *Final Leslie Gulch ACEC Management Plan* (November 1995), which acknowledges the granted road right-of-way. WSA's are managed in accordance with BLM's Interim Management Policy for Lands under Wilderness Review (IMP) (BLM Manual Handbook H-8550-1). In general, the activities allowed under the policy are temporary uses that create no new surface disturbance which require reclamation, those actions which protect or enhance wilderness values, and/or those actions necessary for public health and safety. Until Congress passes legislation to designate individual wilderness study areas as wilderness, or releases them from further wilderness consideration, BLM is required to manage WSA's so as to avoid impairing their suitability for designation as wilderness. Slope destabilization caused by accelerated erosion (undercutting) of the road's adjacent down side (east)embankment results in erosion of the road surface which forces the need for renewed in-cutting of the road to maintain a passable route. The net result of undercutting results in unnatural and accelerated erosion of the road's up slope hillside, thus adversely impacting the special status plants and their habitat. Further, unchecked hillside erosion causes adverse impacts to the high scenic values of the area's topography.

RELATIONSHIP TO BLM POLICY AND OTHER PLANS

The Leslie Gulch ACEC and the Upper Leslie Gulch and Slocum Creek WSAs affected by this action are designated in the Northern Malheur Management Framework Plan (March, 1983). The ACEC's management plan recognizes the Dago Gulch road and associated granted right-of-way.

BLM policy (Manual 6840.06A3) for the management of sensitive species states, "The BLM....shall insure that actions authorized, funded or carried out do not contribute to the need to list any species as Threatened or Endangered" under the federal Threatened and Endangered Species Act.

Constructed roads are not included within WSA's, but serve as a WSA boundary. The Dago Gulch Road is the boundary between the Slocum Creek WSA to its west, and the Upper Leslie Gulch WSA to its east. The IMP for WSA's states, "Necessary, routine maintenance to keep an existing right-of-way in a safe and reliable condition....may be permitted. In such cases, every effort should be made to comply with the nonimpairment criteria. Emergency maintenance or emergency repairs may be made to protect human health and safety or to protect wilderness values even if the activity impairs wilderness suitability." (Chapter III, A3).

Per the IMP (Chapter I, B2a and b) the general nonimpairment criteria are: (1) a use, facility or activity must be temporary, meaning that it can easily and immediately be terminated upon congressional wilderness designation; and (2) when the use, activity or facility is terminated, the wilderness values must not have been degraded so far as to significantly constrain the Congress's prerogative regarding the areas suitability for preservation as wilderness. This IMP reference further states that one of the permitted exceptions to the above two rules are uses and facilities that clearly protect or enhance the land's wilderness values or that are the minimum necessary for public health and safety in the use and enjoyment of the wilderness values.

PROPOSED ACTION AND ALTERNATIVES

The objectives of an acceptable action are to (1) provide a long term solution which protects the subgrade of the road, its present alignment, and its present standard of construction and maintenance from the erosive action of the stream during runoff events; (2) protect the two special status plant species and their habitat; and (3) protect the scenic and other values of the area in a manner so as not to impair the suitability of the WSAs for possible congressional designation as wilderness. Under all alternatives, surface disturbing actions of road repairs would be limited to within the road's 16 foot right-of-way (R/W) (although no disturbance would occur within Slocum Creek WSA) and along and abutting the east boundary of the road R/W, within Upper Leslie Gulch WSA.

Proposed Action

At the two linear locations where concrete barriers have been undercut and the road's subgrade and its associated side slope are subject to accelerated erosion, the following actions would be implemented:

" All existing concrete barriers would be permanently removed from their two locations (see Map 2). This would require the use of a thumbed bucket excavator within the active (sediment-laden) channel of Dago Gulch, within the Upper Leslie Gulch WSA. The excavator would lift the concrete barriers 8 to 15 vertical feet and place them on the road's bladed shoulder, where

they would then be hauled and stockpiled near the Marsing, ID, Highway Scale Station on U.S. Highway 95. Off-road access by the excavator from a small Dago Gulch Road turnout to reach the channel would occur for approximately 40 feet within Upper Leslie Gulch WSA, characterized by a nearly flat entry site 140 feet upstream from the upper washout segment.

" The line of concrete barriers would be replaced by dump truck-transported large rocks of blending coloration and composition of the setting. The rocks would be from a distant non-BLM source. Most rocks would be temporarily placed in the active Dago Gulch channel bottom where the existing road crosses the gulch. The rocks would then be transported by a front loader on the Dago Gulch Road to selected points atop the road at the project site and deposited into the channel. Recoverable side slope material which settles within the channel at these points would be placed back onto the slope as part of the project work. The large rocks would be anchored in a prepared hole along the west edge of the channel and stacked 2-3 rocks high to provide channel protection. They would be of adequate mass to prevent undercutting or movement by severe runoff events. The largest rocks would be up to 6 feet in length; the linear rock placement at the two washout locations would be approximately 125 feet and 145 feet, respectively (see Map 2). Once placed, a portion (2-5 feet) of the aligned rocks would be above the sediment level of the stream channel. The furthest extent east from the road which the rock alignment would be placed within Upper Leslie Gulch WSA (that is, at the toe of the road's side slope embankment, at the channel's west edge) would be approximately 30 feet. Including the width of the channel (9 to 17 feet), the furthest eastern distance of surface disturbing activities from the existing road during project operations would be no greater than 47 feet; it would be less than this where the channel is closer to the road. The eastern edge of operational disturbance would be retained within the active channel, except at about 3 specific sites where it may extend up to four feet east of the channel's presently active channel embankment. Along with smoothing and re-contouring of these sites, any crushed woody vegetation (sagebrush, only) at these 3 sites would be removed from the operation area and/or widely dispersed to minimize visual impacts. A nominal amount of volcanic tuff materials on the road surface would be used for what backfilling on the road's east side slope would be needed to cover any protruding west-facing sides of the channel's constructed rock alignment.

While serving to reinforce the channel's west embankment and preventing further undercutting and erosion of the slope's fragile tuffacous ash soils during runoff events, the rock alignment would absorb some of the energy of the moving water on the west edge of the channel.

" Associated with the two linear segments of anchored natural rock, 6 to 9 foot long "streambed barbs" (see Drawing 1)would be established in the Dago Gulch channel. The 145 foot channel washout segment would have no more than six barbs, the 125 foot washout segment no more than five barbs. The up/down-stream spacing between each barb within their respective linear washout segment would be approximately 25 feet. No barb would extend beyond half the width of the gulch's channel bed, starting at the channel's west side, abutting the linear rock alignment described above.

Each barb would consist of rock from the same source and nature as the large rocks described above. The majority mass of each rock of an installed barb would be anchored in a dug hole in the gulch's channel, and of adequate size to prevent its movement during water/sediment runoff

events. Once planted, about 6 -12 vertical inches of the barb's rocks' upstream edge would be above the present level of the gulch's channel surface. Typically, 2 to 4 large rocks would constitute a given barb.

The streambed barbs would function to dissipate the energy and momentum of runoff events along each of the existing washout segments, and direct flow toward the center of the natural channel, away from the west edge of the channel where unchecked accelerated undercutting is presently occurring and destabilizing the road's subgrade and its associated side slope embankment. The 25-foot spacing between barbs would serve to sufficiently dissipate and decrease runoff energies. Thus, runoff events would result in enhanced release of water-carried sediments between the barbs, effectively decreasing the percentage of gradient of the runoff over the length of the washout segment. The channel gradient would eventually stabilize at a level and directional orientation approaching what it was prior to the 1995 severe runoff event.

Collectively, the channel edge linear rock alignment and the stream barbs would provide long term protection of both the road and the important WSA and ACEC natural values.

" As part of completing operations within the drainage, in-place channel sediments would be smoothed to blend with the placed rocks and surroundings, some of the original in-place surface channel rocks would be randomly distributed to proximate natural placement as observed before operations, and vehicle tracks within the channel bottom (operations area) would be smoothed to reduce visual impacts. Some subsequent runoff events would more so aid to disguise the presence of stream barbs as sediments are deposited around and between them.

" The excavator's channel access site from the road would be reclaimed to correct soil, vegetative and visual impacts. The traveled segment of Dago Gulch Road affected by the repair operations would be smoothed/maintained as needed to an appearance similar to prior to when repair operations were conducted.

" Project activities would be conducted when no flow is occurring within Dago Gulch and soils are adequately dry to prevent undue damage to the road travel surface and channel environment. The entire road repair project would take about two operational weeks to complete.

Alternative A Gabions

At the two linear locations where concrete barriers have been undercut and the road's subgrade and its associated side slope are subject to accelerated erosion, the following actions would be implemented:

" The removal of the concrete barriers and their replacement by aligned rocks; the excavator access site to the gulch's channel; the reclamation activities of the channel and channel access site; and, maintenance activities of the existing road surface upon completion of the project would be the same as described under the Proposed Action.

" Rock cage gabions structures (see Drawing 2) would be installed at approximately 50 foot intervals at both washout locations. Each completed gabion structure would traverse the

channel's entire width (varying between 10 to 17 feet), and consist of 2-3 upstream cages, these partially overlapped and are underlain by 2-3 buried cages serving as a hard point catch apron on the downstream side of the structure. Also, two anchoring cages would be placed into opposing embankments of the channel. Dimensions of each cage would vary, but would need to be large enough so when filled with rock they would have adequate weight to stay in place during major runoff events. They would typically be approximately 6 feet long by 2 feet wide by 2.5 feet high, constructed of heavy gauge (10-12) galvanized wire. At each location, the features of the upstream (cross-channel surface) cages and the two anchoring cages would be noticeable above the channel surface and notably protruding from the embankments, particularly as viewed from downstream due to their noticeable "stair step" appearance across and within the channel. The cages would be filled with rocks of relatively equal sizes (about 4-6 inches in length), large enough to preclude escaping through the cages' wire loops. The only reasonable source for such rock would be BLM's Leslie Gulch Community Rock Pit, located approximately 12 miles east of the road repair site. Rock from this source would be a dense, predominately black and shiny material, substantially unlike the coarser, duller, lighter and varied hues of creams, rusts and light grey of the native tuff materials in Dago Gulch and at the road repair site.

The gabion structures would serve to provide an erosion resistant sill across the channel. The structures contain the sediment-laden flow within the channel with the presence of the gabion's embankment cages while providing a hard point (the downstream catch apron) for dissipating and decreasing the magnitude of a runoff's energy. Further, the structures would enhance the deposition of sediment between each other, and, with runoff events over time, reduce the gradient of the channel to a stabilized condition. As deposition occurs, and the gradient more so stabilizes, significant reductions in vertical channel erosion and subsequent channel-side vegetation loss would occur.

Alternative B Concrete Barriers

At the two linear locations where concrete barriers have been undercut and the road's subgrade and its associated side slope are subject to accelerated erosion, the following would be implemented:

" The on-site concrete barriers would be placed, by location and in the same manner by the excavator, as they were prior to their being undercut and dislodged. The product of this action, and how the project would be implemented, would be the same as under the decision of EA number OR-030-95-1, in 1995. Further, additional concrete barriers would be installed (and associated activities accomplished) as described in the decision of EA OR-030-95-1, to cover the needed total length of presently washed out conditions at the two locations. The additional barriers would extend the prior (1995) 100 foot distance of barriers to 145 feet at one of the washout locations, and from the prior 75 feet to 125 feet at the other washout location.

Alternative C No Action

At the two linear locations where concrete barriers have been undercut and the road's subgrade

and its associated side slope are subject to accelerated erosion, no corrective action would be performed. The existing concrete barriers would remain subject to the forces of nature, and the road's subgrade and associated side slope embankment would remain subject to erosional activities caused by runoff events. The R/W owner would eventually need to cut into the up slope embankment to keep the road passable, as was observed prior to the 1995 road repairs.

AFFECTED ENVIRONMENT

The project site is within the Leslie Gulch ACEC. A description of the area can found in BLM's EA OR-030-945-2 for BLM's *Final Leslie Gulch ACEC Management Plan* (November 1995). See Map 1. Dago Gulch is highly scenic and colorful with its various side drainages of predominately very steep slopes with protruding and highly contrasting vertical rock walls and spires of volcanic tuffaceous ash. Hiking access on public land in the Dago Gulch canyon area south of BLM's locked gate is not restricted. BLM has no accurate measure of visitor use in Dago Gulch. Based on annual vehicular counts on the Leslie Gulch Road, an estimated 1,000 to 2,000 people hike in Dago Gulch annually. Visitors have been observed hiking the road, the gulch's channel, and occasionally on portions of the canyon's steep, rugged slopes.

Wilderness

The Dago Gulch Road is the boundary between the Upper Leslie Gulch WSA to the east and Slocum Creek WSA to the west. See Map 1. The boundaries of the WSAs are at the shoulders of the road, although the road is on a 16 foot wide right-of-way. A description of these WSAs and their values can be found in Volume 4 of BLM's *Final Oregon Wilderness Environmental Impact Statement* (December 1989) and in BLM's *Oregon Wilderness Study Report* (October 1991).

Hydrology

The ephemeral drainage of Dago Gulch generally contains local tuff gravels similar to those on the colluvial hillside. A few dispersed larger rocks up to boulder size are present either within or adjacent to the active channel of the gulch at the project site. The channel, with a five percent gradient at the two washout locations, normally carries a small amount of water in most years. Generally these flows are small in volume and last for short times in the spring or following summer thunderstorms. Infrequently, heavy snow pack or severe thunderstorms cause large runoff events with high water flows and heavy sediment loads. It is these infrequent high flows which are causing damage to the Dago Gulch Road and its prism.

Vegetation and Special Status Plant Species

Two special status plant species found at the project site are listed as Threatened by the State of Oregon: Ertter's senecio (*Senecio ertterae*), and Packard's mentzelia *(Mentzelia packardiae*). Both species are annuals and endemic to the Leslie Gulch tuffaceous ash sediments which occur on the hillside where the Dago Gulch road traverses. The channel bottom does not possess properties to support the two special status plant species. These two special status plant species

are special wilderness and ACEC features. Other plant species in proximity to the project site include Basin big sagebrush, Western juniper, rubber rabbitbrush, Indian ricegrass and bluebunch wheatgrass. At the project site, the road's steep side slope embankments approaching the gulch's active channel do not support perennial vegetation and otherwise are sparsely vegetated with annuals, weather permitting. There are no noxious weeds at or adjacent to the project site.

Cultural Resources

Use of the surrounding area of the Leslie Gulch ACEC by Native Americans is evident in the presence of archaeologic sites and along the Owyhee River (which is now inundated by the reservoir). The river attracted both people and wild animals and served as a winter camping area. People moved to the uplands and spring locations as the weather got warmer. Native Americans in this general area utilized over 50 species of plants and animals, locating from site to site as these resources became available. A Class III cultural survey conducted for the 1995 Dago Gulch Road repair project found no cultural resources along an extended length of the Dago Gulch channel setting.

Wildlife and Special Status Animal Species

California bighorn sheep, *Ovis canadensis* ssp. (listed by BLM as "sensitive" and an identified wilderness and ACEC special feature), can be periodically observed in the vicinity of the project site. The sheep forage over a very large area, so sightings are opportunistic. Many of the bighorn sheep observed in the larger Leslie Gulch watershed (which includes Dago Gulch) appear somewhat accustomed to the presence of motorized vehicles on the Leslie Gulch road. Reptiles such as Western rattlesnakes and fence lizards are also likely to be found in the area. Mojave black-collared lizards (a BLM "tracking" species) also could use nearby rocky habitats. Chukar and a variety of neotropical migratory birds can also be found in the general area.

ENVIRONMENTAL IMPACTS

Proposed Action

Wilderness

Most all excavator operations would be restricted to the alluvial channel bottom, except at about three locations where the width of the channel bottom is narrower than that of the excavator's required operational width (about 13 feet), and at the channel access site. At the three locations and the channel access site, some young sagebrush and varying, non-sensitive native annual plant species would be crushed or altered. Visual impacts to vegetation would be minimized by the dispersal or complete removal of the damaged sagebrush from the project area. Based on observations of vegetative recovery at the same channel access point following the 1995 road repairs, the natural recovery of native vegetation at it and the three channel side sites would likely

be substantial within four years; this time frame would be less should recovery be assisted with the planting and/or seeding of native species.

Alluvial materials of the gulch's channel would be disturbed during temporary storage of rocks and excavator operations. The channel at the existing road crossing would also serve as a turn-around site for haul trucks. With the smoothing and elimination of excavator and haul trucks tracks to be accomplished near the end of project operations, impacts of the equipments' in-channel activities would last only as long as the project's operational period. Backfilling on the road's down side slope would result in further minimizing the aligned rocks' appearance as viewed from the road. The slope's resultant appearance would closely resemble its appearance prior to project operations. The minimal amount of removed native tuffaceous ash materials from the road surface for the backfilling would result in no impact on or change in the road's general appearance, alignment or its serviceability.

The protruding 6 -12 inch uppermost surface of the individual 6 - 9 foot long rock barbs would likely be visible within the channel for a period of time following the project's completion. Their appearance would periodically be less as sediment is deposited around them following runoff events. Due to their short length, short height above the channel surface, and blending coloration with the channel setting, the visual appearance of each barb would be minimized. At each of the two washout sites, their collective sequence of 25-foot spaced placement would, as a whole, initially be more evident than they would be as individual barbs.

During runoff events, the individual and collective appearance of the rock barbs would periodically become less noticeable. Their linear appearance would be substantially less distinguishable with the accumulation of sediments deposited around and between them. The frequency, duration and magnitude of individual runoff events would dictate how quickly the barbs are covered. Over the long term, the degree of the barbs visual presence would ebb and flow, subject to the magnitude of any individual and series of runoff events. At any given time, the downstream side of a barb may be slightly more vertically visible than its upstream side, due to the natural properties of sediment deposition from water as it moves down the channel.

Persons walking in Upper Leslie Gulch WSA, either in the channel or its abutting slopes to the east, would be able to observe the two to four foot vertical appearance of the rock alignment at the two washout locations. Together, the installed rock alignment would establish a linear visual contrast to the gulch's otherwise natural channel setting for an affected distance of about 270 feet within a total 330 foot long segment of the channel. Due to it's proximal association with the road (8 to 30 feet), the linear contrast of the rocks would appear to be more so an element of the road's prism, not as a separate or isolated human imprint within the WSA. From the road, due to backfilling with the same tuff material presently on the road's side slope, most of both rock alignments would not be apparent. Visually and vegetatively, the backfilling would result in virtually the same appearance which the side slope presently displays, being indistinguishable by a casual observer.

The appearance of the rocks and their degree of contrast with both the channel edge rock alignment and the streambed barbs would result in a substantially lower visual impact than the gabions or the concrete barriers of Alternatives A, B and C.

The Proposed Action would meet the nonimpairment criteria of the BLM's WSA IMP policy. The work performed would provide needed protection of identified wilderness values–two special status plants species (and their habitat) and the area's scenic qualities–as well as provide for safe passage on the road by authorized use granted by right-of-way. In addition, with the road repairs and associated mitigative measures, although permanent in nature the repairs would not degrade wilderness values of the affected Upper Leslie Gulch WSA so far as to significantly constrain the Congress's prerogative regarding the WSA's suitability for preservation as wilderness.

Hydrology

Equipment operations within the ephemeral drainage would create disturbed areas and leave some loose sediment gravel. Some of this loose sediment would be carried downstream in a subsequent runoff event, however most of it would be trapped by the affects of the in-channel barbs. The amount carried downstream would be insignificant relative to what would be deposited. The visual appearance of the barbs may ebb and flow over time due to variable sediment deposition. However, the barbs would continue to serve their purpose over the long term by directing flow toward the channel's desired (pre-1995) orientation. The rock alignment at the toe of the road side slope would aid in reducing sediment load in the short and long term by protecting the slope from the erosive energy of runoff events.

The positive affects of the combined rock alignment and barbs for directing channel flows toward its pre-1995 orientation and in dissipating runoff energy would be greater than the actions under any of the alternatives.

Vegetation and Special Status Plant Species

Some short term reduction in productivity of the special status plant species may occur on the road's channel-side slope as on-site plant seeds are possibly destroyed during soil movement or buried too deep with soil refill to survive. Based on plant monitoring following the 1995 road repair work, this impact would be of short duration, with the slope quickly subject to dispersed seeds from the adjacent up-slope (of road) plants and their germination to an extent comparable to what was observed prior to implementing the 1995 road repair activities. The long-term impacts resulting from stabilizing the slope and eliminating the need for further road repair would be beneficial to both special status plant species and their habitat. Based on past observations at the channel access site following the 1995 road repair activities, it is anticipated that perennial native species will naturally revegetate the site directly following completed operations.

Cultural Resources

There would be no impacts to cultural resources.

Wildlife and Special Status Animal Species

The only potential impacts to wildlife would be short term disturbances during the operational

two week period of the project. Bighorn sheep would be able to readily avoid the linear zone influence of the project for its duration. This would be the same under Alternatives A and B.

Alternative A Gabions

Wilderness

Impacts at the channel access site and within the channel would be similar to those described under the Proposed Action, with the following exceptions: the installed channel gabions would be more visually evident and intrusive because (1) they are significantly larger in size and with a greater exposed surface area above and across the channel's entire width, and (2) the use of sharply angular, linear constructed cages of large gauge wire containing highly contrasting and unharmoniously colored and textured rock. The rock would not need to be temporarily stored in the channel where the road crosses it, but there would likely be more damage to the road's side slope at the washout segments as the imported rock was deposited into the channel from the road.

As with the Proposed Action, actions under this alternative would be consistent with the wilderness nonimpairment criteria requirements, and the Upper Leslie Gulch WSA would remain suitable for preservation as wilderness. However, overall, environmental impacts of gabion placement would be greater than actions of the Proposed Action, while retaining the WSA's suitability for wilderness designation.

Hydrology

The extent of disturbance to the channel environment during gabion cage construction and placement would be similar to that described under the Proposed Action. In combination with the channel's edge rock alignment, gabions would force runoff to stay within a desired orientation (i.e., away from the road's subgrade and associated hill slope), as well as dissipate runoff energies and enhance the deposition of sediments at the washout segments. With a lesser ability to directionally control (reflectively steer) runoff flows, the effectiveness of the gabions/rock alignment combination would not be as good as would the barbs/rock alignment combination. Also, their fewer numbers would need to be compensated by their much greater mass to affect and control runoff alignment and sediment deposition, but with the less efficient tradeoff of the rock alignment needing to absorb and ward off more of a runoff's energies than under the Proposed Action. Gabions would more so control the retainment of runoff events than would concrete barriers under Alternatives B and C.

Vegetation and Special Status Plant Species

Impacts to vegetation would be as described under the Proposed Action. Also, an insignificant amount of additional vegetation adjacent to the channel's east edge would be destroyed than under the Proposed Action to accommodate the placement of each gabion's anchoring cage.

Cultural Resources

There would be no impacts to cultural resources.

Wildlife and Special Status Animal Species

Impacts would be as described under the Proposed Action.

Alternative B Concrete Barriers

Wilderness

Impacts at the channel access site and within the channel would be similar to those described under the Proposed Action, with the following exceptions: Since the barriers would rest atop the channel's surface, there would be no hole prepared for them to rest in, and the barriers would be shorter in stature, overall because they would not be stacked. Where observable, the aligned rocks would appear up to three feet higher than the concrete barriers. However, the concrete barriers would create a greater visual impact than would the rock alignment of the Proposed Action and Alternative A, due to their very light grey color contrasting sharply against the darker rusts and browns of the abutting channel sediments, and their very linear, massive, and blocked appearance. Other impacts to important wilderness and ACEC values are addressed under Hydrology, below.

Actions under this alternative would meet nonimpairment criteria requirements, and the Upper Leslie Gulch WSA would remain suitable for preservation as wilderness. Overall, environmental impacts of concrete barrier placement would be greater than actions of the Proposed Action, yet the WSA's suitability for wilderness designation would be retained. However, as witnessed by the past outcome of concrete barrier placement, periodic re-entry into and repetitive environmental impacts within the WSA would be required to perform anticipated needed repairs and maintenance of the concrete barriers' alignment. In conclusion, the repeated and cumulative impacts to wilderness values do not justify conducting the needed maintenance of the concrete barriers, and whose function, as witnessed, would not adequately control the adverse effects of runoff events.

Hydrology

Disturbance to the channel's surface alluvial sediments during the placement of concrete barriers would be as described under the Proposed Action. Without concrete barriers being buried and stacked at the channel's edge, their inadequate performance, even with additional installed barriers to cover the needed distance at each washout segment, would be as occurred following their 1995 installation.

This repair, based on what has happened to the barriers during recent years, would be only temporary in nature. Runoff events would again result in the barriers eventually being undercut, dislodged and dislocated further downstream, as is the present situation. The road's side slope would be subject to repeated erosional impacts. If left unchecked, portions of the road's travel surface would eventually begin eroding downslope. This would require reoccurring in-cutting

during road maintenance with resultant direct adverse impacts to the special wilderness and ACEC features (special status plants, their habitat and the area's high scenic values).

Except for Alternative C, this Alternative would cause the greatest impact to wilderness and ACEC values. Further, the road's structural integrity would be threatened and weaken, and the inability to travel the road along the hill cut safely as impacts of runoff events accrue.

Vegetation and Special Status Plant Species

In the short term, impacts to vegetation directly adjacent to the channel during barrier placement and site reclamation work would be as described under the Proposed Action. Impacts to vegetation, including the special status plants and their habitat, is further described under Hydrology, above.

Cultural Resources

There would be no impacts to cultural resources.

Wildlife and Special Status Animal Species

Impacts would be as described under the Proposed Action.

Alternative C No Action

Wilderness

Doing nothing to protect the road, its subgrade and adjacent slopes would cause the most severe adverse impacts to the wilderness and ACEC special features of scenic quality, special status plants species, and their habitat. Increased slope and road erosion and soils destruction would continue to occur. Further, as present concrete barriers are dislodged and gradually move downstream, they would become obstacles in the channel causing additional erosion around them.

Hydrology

Undirected channel flows would eventually result in unnecessary and undue damage to public land resources by causing extensive damage to the channel's west hill slope (and to its affiliated road). While runoff is currently directed into the west hill slope, runoff may eventually alter course away from the hill slope. However, since this is not predictable, and because special WSA and ACEC values would be at risk and the need to provide for safe passage on the road, waiting for runoff events to return to the pre-995 channel course is not an option.

Vegetation and Special Status Plant Species

Based on existing circumstances and observations, the two special status plant species and their

habitat would be subject to elevated threats of destruction as the road is repeatedly graded further into the up slope hillside by the owner of the valid existing right-of-way in order to provide for safe passage on the road. By doing nothing as an action, the policy of BLM to insure that actions authorized, funded or carried out do not contribute to the need to list any species as Threatened or Endangered under the federal Endangered Species Act would be violated.

Cultural Resources

There would be no impacts to cultural resources.

Wildlife and Special Status Animal Species

There would be no impacts to wildlife resources.

Other Values

The following resources are either not present or would not be affected by the Proposed Action or by any of the alternatives considered.

Air quality
Water Quality
Prime or unique farmlands
Flood plains
Hazardous waste sites
Wetlands
Wild and Scenic Rivers
Fisheries
Environmental Justice
Invasive, Nonnative Species
Native American Religious Concerns
Paleontological Resources

MITIGATION MEASURES

" Road repair work would not be conducted during water saturated or otherwise muddy surface conditions.

" Except at the channel access site, equipment operation away from the road would be restricted to the alluvial bottom of the channel to the maximum extent possible, and the number of trips in and out of the channel would be minimized.

" Rocks used would be selected for minimal color and texture contrast.

“ During surface-disturbing construction and maintenance activities, BLM would ensure that all construction equipment and vehicles are cleaned of all vegetation (stems, leaves seeds and all other vegetative parts) prior to entering public lands in order to minimize the transport and spread of noxious weeds.

RESIDUAL IMPACTS OF PROPOSED ACTION

There would be a long term visual impact to the immediate area of the project site in the WSA by the presence of the rock alignment and streambed barbs. This impact would be mitigated by using natural materials which blend well with the channel environment. The casual observer would more so notice the extent of these features from within the channel environment and the adjacent rising terrain east of the channel. Due to their proximity to the existing road and its prism of visual influence in the immediate vicinity, the barbs and rock alignment would more so appear as an extended element of the road than as an isolated or surrounded human imprint within the Upper Leslie Gulch WSA.

PERSONS AND ORGANIZATIONS CONSULTED

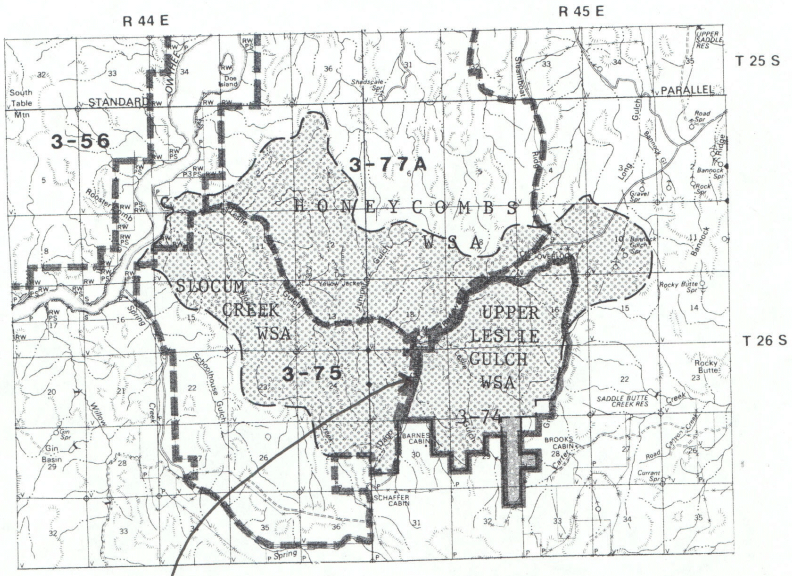
Duncan Mackenzie, right-of-way owner
Bud Greeley, affected grazing permittee

PARTICIPATING STAFF

Bob Alward, Outdoor Recreation Planner
Jean Findley, Botanist
Al Bamman, Wildlife Biologist
Richard Martinez, Engineering Technician
Vern Pritchard, Engineer
Dave Evans, Force Account/Operations Supervisor
Diane Pritchard, Archeologist
Lynne Silva, Weeds Management Specialist
Jack Wenderoth, Hydrologist
Shaney Rockefeller, Soils Management/Hydrologist
Jon Freeman, Lands/Realty Specialist
Tom Hilken, Natural Resources Supervisor (interim)
Tom Dabbs, Malheur Resource Area Field Manager (acting)

DAGO GULCH ROAD REPAIR

MAP 1 -- General Area



LEGEND

- Wilderness Study Area Boundary
- Boundary of Adjacent Wilderness Study Areas
- Leslie Gulch ACEC
- Mahogany Mountain RNA

U.S. Department of the Interior
Bureau of Land Management
Vale District

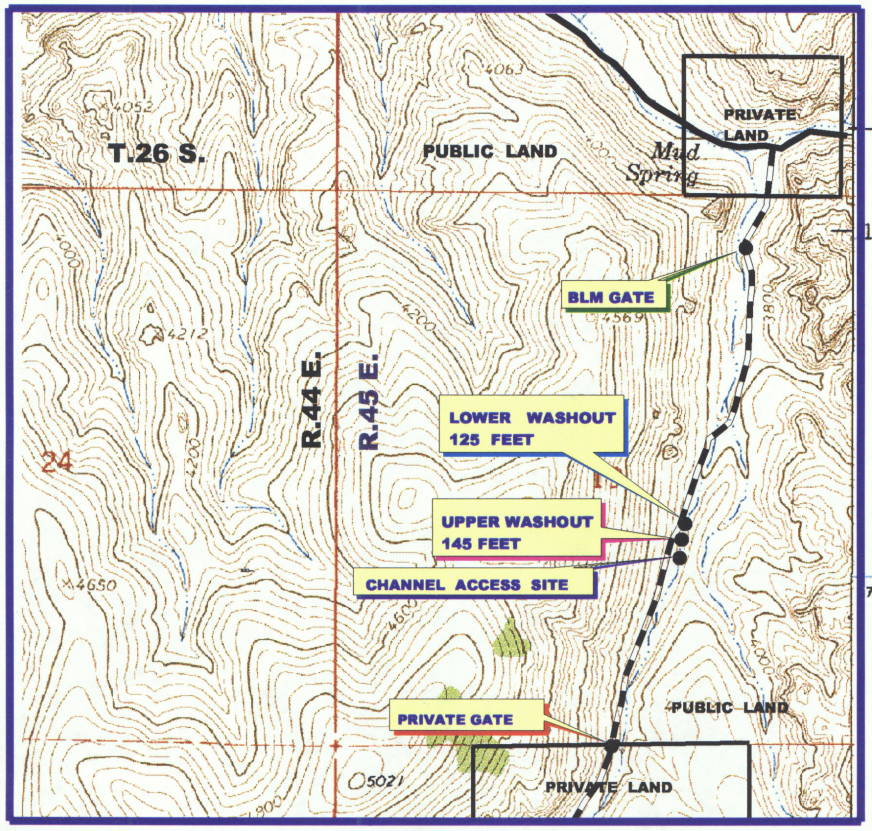
Upper Leslie Gulch
OR-3-74

AREA OF CRITICAL ENVIRONMENTAL CONCERN & RESEARCH NATURAL AREA

1 0 1 2 MILES

DAGO GULCH ROAD REPAIRS

MAP 2



T.26 S., R.45 E., SECTION 19

SCALE: 1" = 1225 FEET

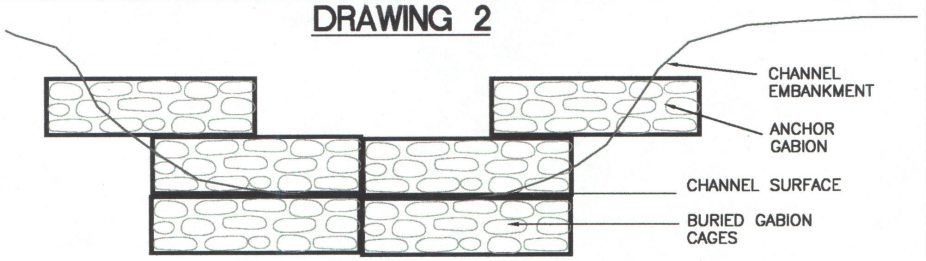
LEGEND

DAGO GULCH ROAD ▬ ▬ ▬

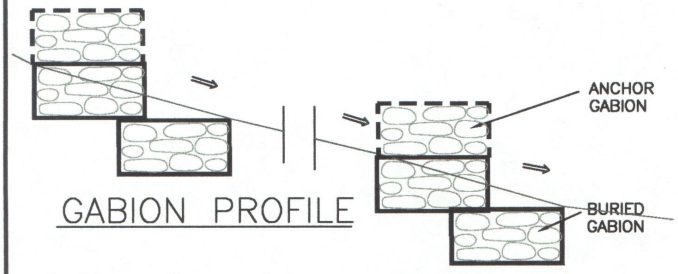
LESLIE GULCH ROAD ▬▬▬▬

N
W R.V.M. 03/06/02 E
S

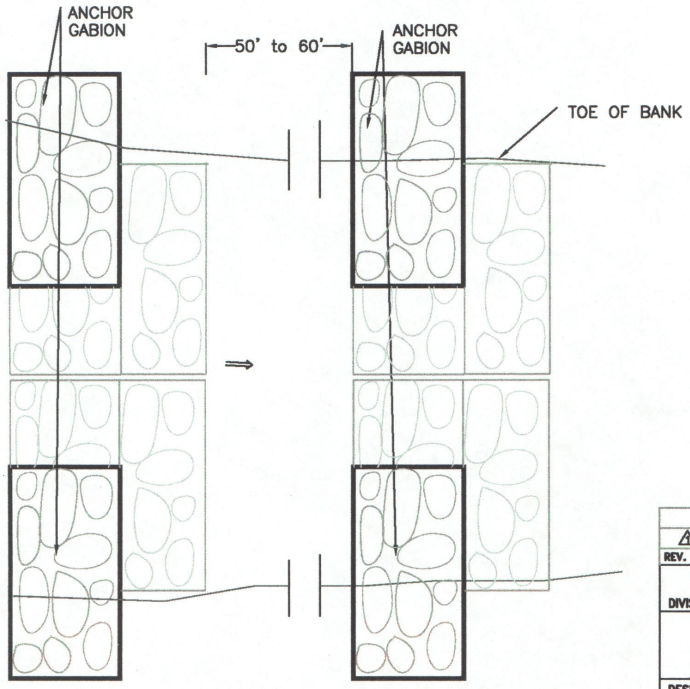
DRAWING 2



GABION CROSS–X



GABION PROFILE



GABION PLAN

20

REV. NO.	DESCRIPTION	DATE	APPROVED

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
DIVISION OF OPERATIONS — OREGON STATE OFFICE

GABION DETAILS

DESIGNED
REVIEWED
APPROVED

DRAWN: CG	SCALE: NTC
DATE: 3/08/02	SHEET 1 OF 1

DRAWING NO.

FINDING OF NO SIGNIFICANT IMPACT/DECISION

FINDING OF NO SIGNIFICANT IMPACT

Based upon the analysis of potential environmental impacts contained in the attached Environmental Assessment (OR-030-02-021), I have determined that impacts associated with the proposed action are not expected to be significant and that an environmental impact statement is not necessary.

Authorized Official: _____ Date: _____
Field Manager, Malheur Resource Area